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L17 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN *Same invention*
 AN 2002:573504 HCAPLUS
 DN 137:143015
 ED Entered STN: 02 Aug 2002
 TI Secondary lithium ion battery containing cobalt lithium nickel
 halide oxide cathode active material
 IN Kanai, Hideyuki; Kanda, Motoshi; Kubo,
 Koichi
 PA Toshiba Corp., Japan
 SO Jpn. Kokai Tokkyo Koho, 19 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM H01M004-58
 ICS C01G053-00; H01M004-02; H01M010-40
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002216759	A2	20020802	JP 2001-14892	20010123

PRAI JP 2001-14892

20010123

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2002216759	ICM	H01M004-58
	ICS	C01G053-00; H01M004-02; H01M010-40

AB The battery contains Lix(Nil-y-vCovMly) (O2-zXz),
 Lix(Nil-y-u-vCovMlyM2u) (O2-zXz), or Lix(Nil-v-s-tCovVsM3t) (O2-zXz)
 as a cathode active material. [M1 = Cr, Hf, and/or W; M2 = Ti, V,
 Zr, Nb, Mo, and/or Ta; M3 = Cr, Zr, Nb, Mo, Hf, Ta, and/or W; X = F,
 Cl, Br, and/or I; x = 0.02-1.3; y = 0.005-0.3; z = 0.01-0.5; v =
 0.005-0.5; 0 < u .ltoreq. 0.3; s = 0.005-0.3; 0 < t .ltoreq. 0.3
 (molar ratio)]. The battery shows improved cycling performance and
 safety.

ST lithium ion battery cathode active material complex halide oxide;
 cobalt lithium nickel halide oxide cathode battery; safety cycling
 performance lithium battery

IT Secondary batteries
 (lithium; secondary lithium ion battery contg. cobalt lithium
 nickel halide oxide cathode active material)

IT Battery cathodes
 Safety

(secondary lithium ion battery contg. cobalt lithium nickel
halide oxide cathode active material)

IT	444843-39-4P	444843-40-7P	444843-41-8P	444843-42-9P
	444843-43-0P	444843-44-1P	444843-45-2P	444843-46-3P
	444843-47-4P	444843-48-5P	444843-49-6P	444843-50-9P
	444843-51-0P	444843-52-1P	444843-53-2P	444843-54-3P
	444843-55-4P	444843-56-5P	444843-57-6P	444843-58-7P
	444843-59-8P	444843-60-1P	444843-61-2P	444843-62-3P
	444843-63-4P	444843-64-5P	444843-65-6P	444843-66-7P
	444843-67-8P	444843-68-9P	444843-69-0P	444843-70-3P
	444843-71-4P	444843-72-5P	444843-73-6P	444843-74-7P
	444843-75-8P	444843-76-9P	444843-77-0P	444843-78-1P
	444843-79-2P	444843-80-5P	444843-81-6P	444843-82-7P
	444843-83-8P	444843-84-9P	444843-85-0P	444843-86-1P
	444843-87-2P	444843-88-3P	444843-89-4P	444843-90-7P
	444843-91-8P	444843-92-9P	444843-93-0P	444843-94-1P
	444843-95-2P	444843-96-3P	444843-97-4P	444843-98-5P
	444843-99-6P	444844-00-2P	444844-01-3P	444844-02-4P
	444844-03-5P, Chromium lithium nickel fluoride oxide			
	(Cr0.01Li1.1Ni0.99F0.10I.9)	444844-04-6P, Chromium lithium nickel		
	fluoride oxide (Cr0.05Li1.1Ni0.95F0.10I.9)	444844-05-7P, Chromium		
	lithium nickel fluoride oxide (Cr0.2Li1.1Ni0.8F0.10I.9)			
	444844-06-8P, Hafnium lithium nickel fluoride oxide			
	(Hf0.02Li1.1Ni0.98F0.10I.9)	444844-07-9P, Hafnium lithium nickel		
	chloride oxide (Hf0.08Li1.1Ni0.92Cl0.10I.9)	444844-08-0P, Hafnium		
	lithium nickel chloride oxide (Hf0.15Li1.1Ni0.85Cl0.10I.9)			
	444844-09-1P, Lithium nickel tungsten chloride oxide			
	(Li1.1Ni0.97W0.03Cl0.10I.9)	444844-10-4P, Lithium nickel tungsten		
	chloride oxide (Li1.1Ni0.9W0.1Cl0.10I.9)	444844-11-5P, Lithium		
	nickel tungsten bromide oxide (Li1.1Ni0.75W0.25Br0.10I.9)			
	444844-12-6P	444844-13-7P	444844-14-8P	444844-15-9P, Chromium
	lithium nickel fluoride oxide (Cr0.1Li1.1Ni0.9F0.10I.9)			
	444844-16-0P	444844-17-1P	444844-18-2P	444844-19-3P
	444844-20-6P	444844-21-7P	444844-22-8P	444844-23-9P
	444844-24-0P	444844-25-1P	444844-26-2P	444844-27-3P
	444844-28-4P	444844-29-5P	444844-30-8P	444844-31-9P
	444844-32-0P	444844-33-1P	444844-34-2P	444844-35-3P
	444844-36-4P	444844-37-5P	444844-38-6P	444844-39-7P
	444844-40-0P	444844-41-1P	444844-42-2P	444844-43-3P
	444844-44-4P	444844-45-5P	444844-46-6P	444844-47-7P
	444844-48-8P	444844-49-9P	444844-50-2P	444844-51-3P
	444844-52-4P	444844-53-5P	444844-54-6P	444844-55-7P
	444844-56-8P	444844-57-9P	444844-58-0P	444844-59-1P
	444844-60-4P	444844-61-5P	444844-62-6P	444844-63-7P
	444844-64-8P			

(secondary lithium ion battery contg. cobalt lithium nickel
halide oxide cathode active material)

L17 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2002:47940 HCAPLUS
 DN 136:105140
 ED Entered STN: 18 Jan 2002
 TI Secondary nonaqueous electrolyte battery
 IN Kubo, Koichi; Kanai, Hideyuki; Yamada, Shuji;
 Kanda, Motoki
 PA Toshiba Corp., Japan
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM H01M010-40
 ICS H01M004-02
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002015776	A2	20020118	JP 2000-199939	20000630
PRAI JP 2000-199939		20000630		30

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2002015776	ICM	H01M010-40
	ICS	H01M004-02
AB	The battery uses a Li compd. cathode, where the Li compd particles are coated with a Li- and free electron-contg. conductive perovskite compd. $\text{Li}_{1-x}\text{MyM}'\text{zO}_3\text{-zFz}$ (M = monovalent element, bivalent element, and/or lanthanoid element; M' = Group IVA, VA, VIA, VIIA, VIII, and/or IB element; $x < 1$, $y < 1$, $0 < z \leq 3$).	
ST	secondary lithium battery cathode active mass coating; lithium battery cathode active mass perovskite coating	
IT	Battery cathodes (cathode active mass particles coated with lithium and free electron contg. perovskite oxides for secondary lithium batteries)	
IT	12057-17-9, Lithium manganese oxide (LiMn_2O_4) 12190-79-3, Cobalt lithium oxide (CoLiO_2) 130811-81-3, Lithium manganese nickel oxide ($\text{LiMn}_{1.6}\text{Ni}_{0.4}\text{O}_4$) (cathode active mass particles coated with lithium and free electron contg. perovskite oxides for secondary lithium batteries)	
IT	389111-31-3, Copper lanthanum lithium fluoride oxide	

(CuLa_{0.8}Li_{0.2}F_{0.4}O_{2.6}) 389111-33-5 389111-35-7 389111-37-9
 389111-39-1, Copper lithium neodymium fluoride oxide
 (CuLi_{0.2}Nd_{0.8}F_{0.4}O_{2.6}) 389111-41-5 389111-43-7 389111-45-9
 389111-47-1, Copper lithium strontium fluoride oxide
 (CuLi_{0.2}Sr_{0.8}F_{1.2}O_{1.8}) 389111-49-3 389111-51-7 389111-53-9
 (cathode active mass particles coated with lithium and free
 electron contg. perovskite oxides for secondary lithium
 batteries)

L17 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2001:710109 HCAPLUS
 DN 135:275340
 ED Entered STN: 28 Sep 2001
 TI Secondary nonaqueous-electrolyte lithium batteries having cathodes
 containing electrically conductive oxide coatings on active mass
 particles
 IN Kubo, Koichi; Kanai, Hideyuki; Kanda,
 Motoki
 PA Toshiba Corp., Japan
 SO Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM H01M004-58
 ICS H01M010-40
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2001266879	A2	20010928	JP 2000-80199	200003 22

PRAI JP 2000-80199 20000322

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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JP 2001266879	ICM	H01M004-58
	ICS	H01M010-40

AB In the batteries, cathode active mass particles are coated with
 elec. conductive oxides which have free electrons and are selected
 from (A) AB₂O₃ (A = divalent typical element, lanthanide; B =
 transition metals selected from Group IVB, VB, VIB, VIIB, VIIIB, and
 IB metal), (B) A₂B₂O₄ having K₂NiF₄-type structure, and (C) mixts. of
 (A) and (B). Preferably, the oxides are SrVO₃, SrFeO₃, SrCrO₃,
 La_{1-x}Sr_xMnO₃ (x = 0.15-0.6), LaNiO₃, LaSrNiO₄, and/or LaCuO₃. The

presence of the oxide coatings improves thermal stability of the batteries in charging state.

- ST lithium battery cathode coating elec conductor oxide; transition metal oxide coating cathode lithium battery
- IT Secondary batteries
(lithium; secondary Li batteries having cathodes contg. elec. conductive transition metal oxide coatings on active mass particles)
- IT Electric conductors
(oxides; secondary Li batteries having cathodes contg. elec. conductive transition metal oxide coatings on active mass particles)
- IT Battery cathodes
(secondary Li batteries having cathodes contg. elec. conductive transition metal oxide coatings on active mass particles)
- IT 362673-06-1, Cobalt lithium nickel fluoride oxide (Co_{0.17}Li_{1.08}Ni_{0.78}F_{0.101.9}) 362673-07-2, Aluminum lithium nickel fluoride oxide (Al_{0.17}Li_{1.08}Ni_{0.78}F_{0.101.9}) 362673-08-3, Aluminum lithium nickel fluoride oxide (Al_{0.22}Li_{1.08}Ni_{0.71}F_{0.101.9})
(cathode active mass; secondary Li batteries having cathodes contg. elec. conductive transition metal oxide coatings on active mass particles)
- IT 12022-69-4, Iron strontium oxide (FeSrO₃) 12031-18-4, Lanthanum nickel oxide (lanio₃) 12143-36-1, Strontium vanadium oxide (SrVO₃) 12201-03-5, Lanthanum nickel strontium oxide (LaNiSrO₄) 37249-72-2, Copper lanthanum oxide (CuLaO₃) 39282-77-4, Chromium strontium oxide (CrSrO₃) 64296-91-9, Lanthanum manganese strontium oxide (La_{0.5}MnSr_{0.5}O₃) 362673-05-0, Lanthanum manganese strontium oxide (La_{0.4-0.85}MnSr_{0.15-0.60}O₃)
(elec. conductive coatings; secondary Li batteries having cathodes contg. elec. conductive transition metal oxide coatings on active mass particles)
- L17 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
- AN 2001:485498 HCAPLUS
- DN 135:95146
- ED Entered STN: 06 Jul 2001
- TI Secondary nonaqueous electrolyte batteries and battery groups
- IN Ikasaki, Yoshiyuki; Yoshioka, Shunsuke; Morishima, Hideaki; Tatebayashi, Yoshinao; Sato, Yuji; Kubo, Koichi; Kanai, Hideyuki; Kanda, Motoshi
- PA Toshiba Corp., Japan
- SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
- DT Patent
- LA Japanese
- IC ICM H01M004-58

ICS H01M004-02; H01M010-40
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001185143	A2	20010706	JP 1999-367077	19991224

PRAI JP 1999-367077

19991224

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2001185143	ICM ICS	H01M004-58 H01M004-02; H01M010-40
AB	The batteries use cathodes composed of 2 active masses, where the 1st active mass is a B, Nb, and/or F contg. Li Ni oxide, and the 2nd active mass is spinel type Li Mn oxide. Preferably, the 1st active mass is $\text{Li}_{1+x}\text{Ni}_{1-x-y}\text{aCo}_y\text{MaO}_{2-z}\text{F}_z$, where $M = \text{B}$ and/or Nb , $x \leq 0.5$, $0 < y \leq 0.5$, $z \leq 0.5$, $z \leq 2$, and $0 < (x+y+a) \leq 0.5$. The battery groups have the above batteries connected in series.	
ST	secondary lithium battery cathode active mass mixt; cobalt lithium nickel oxide cathode battery; boron substituted cobalt lithium nickel oxide cathode; niobium substituted cobalt lithium nickel oxide cathode; fluoride substituted cobalt lithium nickel oxide cathode; nonaq electrolyte	
IT	Battery cathodes (substituted lithium nickel oxide-spinel type lithium manganese oxide mixt. cathodes in secondary lithium batteries)	
IT	245511-78-8, Cobalt lithium nickel fluoride oxide ($\text{Co}_{0.17}\text{Li}_{1.08}\text{Ni}_{0.76}\text{F}_{0.10}\text{O}_{1.9}$) 348641-58-7, Cobalt lithium nickel fluoride oxide ($\text{Co}_{0.17}\text{Li}_{1.08}\text{Ni}_{0.76}\text{F}_{0.05}\text{O}_{1.95}$) 348641-59-8, Cobalt lithium nickel fluoride oxide ($\text{Co}_{0.17}\text{Li}_{1.08}\text{Ni}_{0.76}\text{F}_{0.15}\text{O}_{1.85}$) 348641-60-1, Cobalt lithium nickel fluoride oxide ($\text{Co}_{0.17}\text{Li}_{1.08}\text{Ni}_{0.76}\text{F}_{0.20}\text{O}_{1.8}$) 348641-61-2 348641-62-3, Cobalt lithium nickel niobium oxide ($\text{Co}_{0.18}\text{LiNi}_{0.8}\text{Nb}_{0.03}\text{O}_2$) 348641-63-4, Cobalt lithium nickel niobium oxide ($\text{Co}_{0.18}\text{LiNi}_{0.8}\text{Nb}_{0.02}\text{O}_2$) 348641-64-5, Cobalt lithium nickel niobium oxide ($\text{Co}_{0.18}\text{LiNi}_{0.78}\text{Nb}_{0.05}\text{O}_2$) 348641-65-6 348641-66-7, Cobalt lithium nickel borate oxide ($\text{Co}_{0.18}\text{LiNi}_{0.8}(\text{BO}_3)_0.03\text{O}_{1.91}$) 348641-67-8, Lithium manganese oxide ($\text{Li}_{1.05}\text{Mn}_{1.94}\text{O}_4$) (substituted lithium nickel oxide-spinel type lithium manganese oxide mixt. cathodes in secondary lithium batteries)	